

WHAT IS CLAIMED IS:

1. A color matching method in which, when color reproduction ranges of a first device and a second device differ, image data within a color reproduction range of said first device is converted using a conversion parameter into image data within a color reproduction range of said second device, comprising the steps of:

obtaining data related to a specific color of said first device and data related to a specific color of said second device in a prescribed color space; and

determining said conversion parameter by estimating the color reproduction range of said first device and the color reproduction range of said second device based on the respective data related to the specific color that are obtained.

2. The color matching method according to claim 1, wherein said conversion parameter to be determined includes at least one parameter of parameters related to conversions of lightness, chroma, and hue.

3. The color matching method according to claim 1, wherein said prescribed color space is independent of a device.

4. The color matching method according to claim 1, wherein the data related to the specific color of said first device and said second device include data or a color temperature of a white point, and said determining step includes a first determining step of determining a parameter related to conversion of chroma based on the respective data or color temperatures of the white point that are obtained.

5. The color matching method according to claim 1, wherein the data related to the specific color of said first device and said second device include data of a blue point, and

said determining step includes a first determining step of  
5 determining a parameter related to conversion of chroma based on the  
respective data of the blue point that are obtained.

6. The color matching method according to claim 1, wherein  
the data related to the specific color of said first device include data of  
a blue point, a red point, and a green point, and

said determining step includes a second determining step of  
5 determining a parameter related to hue based on the obtained respective  
data of the blue point, the red point, and the green point.

7. The color matching method according to claim 1, wherein  
the data related to the specific color of said first device include data of  
a blue point, a red point, and a green point, and the data related to the  
specific color of said second device include data of a blue point, a red point, a  
5 green point, a cyan point, a magenta point, and a yellow point, and

said determining step includes

a step of calculating a second blue point from data of the blue  
point and the cyan point of said second device obtained,

a step of calculating a second red point from data of the red  
10 point and the magenta point of said second device obtained,

a step of calculating a second green point from data of the  
green point and the yellow point of said second device obtained, and

a second determining step of determining a parameter  
related to conversion of hue based on the second blue point, the  
15 second red point, and the second green point calculated, and data of  
the blue point, the red point, and the green point of the first  
device obtained.

8. A color matching device for converting image data within a color  
reproduction range of a first device into image data within a color  
reproduction range of a second device using a conversion parameter when  
the color reproduction ranges of said first device and said second device

5 differ, comprising:

an obtaining portion for obtaining data related to a specific color of said first device and data related to a specific color of said second device in a prescribed color space; and

10 a determining portion for determining said conversion parameter by estimating the color reproduction range of said first device and the color reproduction range of said second device based on the respective data related to the specific color that are obtained.

9. A computer readable record medium storing a color matching program for having a computer execute a color matching method for converting image data within a color reproduction range of a first device into image data within a color reproduction range of a second device when the color reproduction ranges of said first device and said second device differ, wherein

said color matching method includes the steps of

obtaining data related to a specific color of said first device and data related to a specific color of said second device in a prescribed color space and

10 determining a conversion parameter by estimating the color reproduction range of said first device and the color reproduction range of said second device based on the respective data related to the specific color that are obtained.

10. A color matching program for having a computer execute color matching processing in a first color image reproduction device and a second color image reproduction device, comprising:

5 a first obtaining step of obtaining data of a white point and a black point in a first color space reproduced by said first color image reproduction device;

a second obtaining step of obtaining data of a white point and a black point in a second color space reproduced by said second color image reproduction device;

10           a step of estimating general shapes of said first color space and said  
second color space based on the data obtained by the first and second  
obtaining steps; and

          a step of determining a conversion parameter for converting, based on  
the estimation, data within said first color space into data within said  
15   second color space.

11.   The color matching program according to claim 10, wherein  
said conversion parameter is a parameter for correcting at least one of  
hue and lightness.